



# Lion Force Strategy

Pitch Document - WIP

June 2018



Ka Kui Cheng Ye  
Authors: Karthik Moorthy@, @. Contributors: Greg Hart

**EXHIBIT 5653.R**

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**EXHIBIT 5653.R-001**

GOOG-PLAY-000375525.R

**Slide 1**

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- 1 Replace grainy image  
Ka Kui Cheng Ye, 7/5/2018

## Contents :

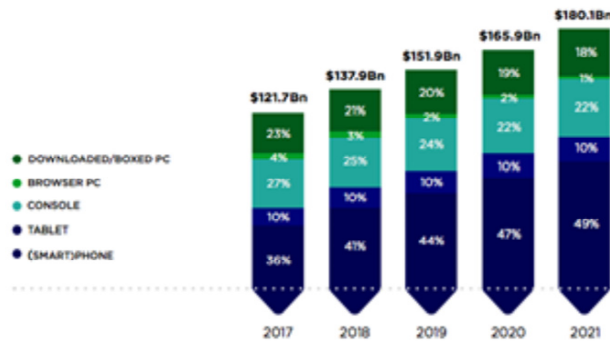


- 1. What's happening in gaming?**
- 2. How are we doing in gaming?**
- 3. What are our competitors' gaming strategies?**
- 4. What opportunities do we have?**
- 5. How do we capitalize on these opportunities?**

# Gaming has grown into a \$130+ Bn industry, larger than music and movies combined

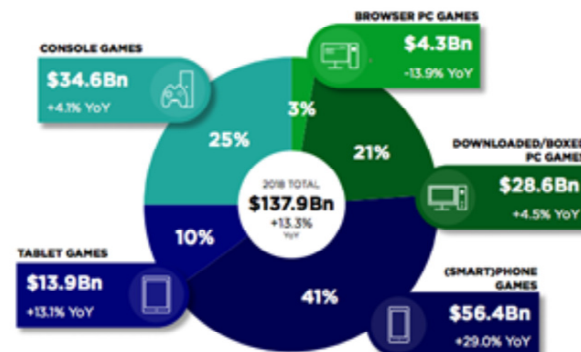
Gaming will continue to grow rapidly with a 10.3% CAGR until 2021

Projected global consumer spend (2017-2021) by device type



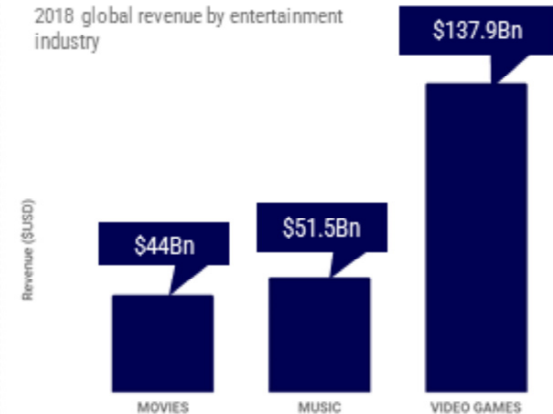
Mobile gaming is already the largest segment and the fastest growing with a project 29% YoY growth rate

2018 global consume spend by device type



Gaming is larger than both music and movies industries combined

2018 global revenue by entertainment industry



Video game revenues above are defined as revenue generated by developers from consumer spending on games. It does not include:

- Advertising
- Hardware and peripherals
- B2B services, such as cloud infrastructure

Sources: Newzoo 2018 Global Games Report, [Statista Movie Industry \(Box office revenue\)](#), [Statista Music Industry](#)

Slide 3

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2 Breakdown mobile spend between iOS and Android

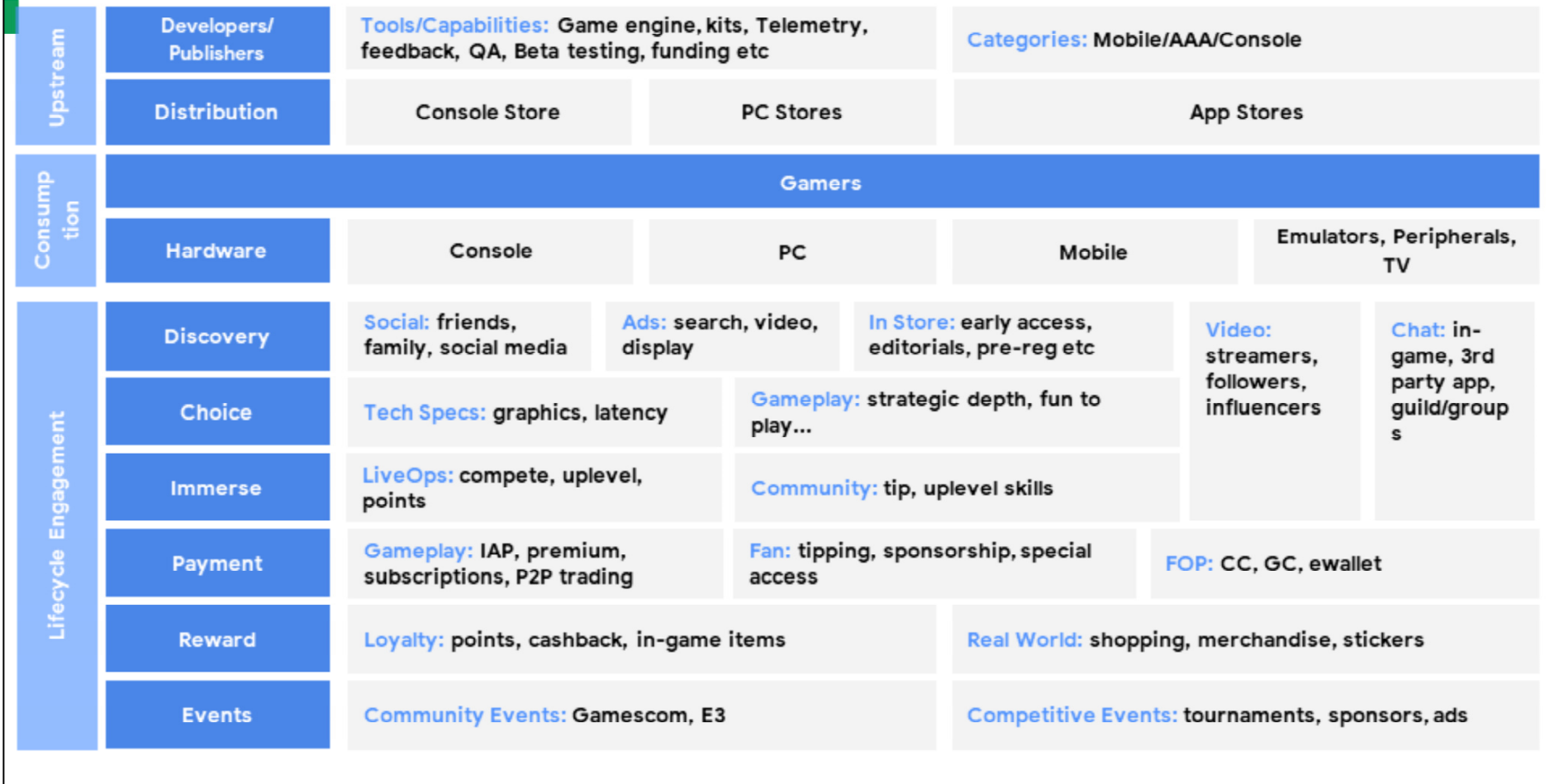
Ka Kui Cheng Ye, 7/11/2018

1 Karthik Moorthy [REDACTED]@google.com

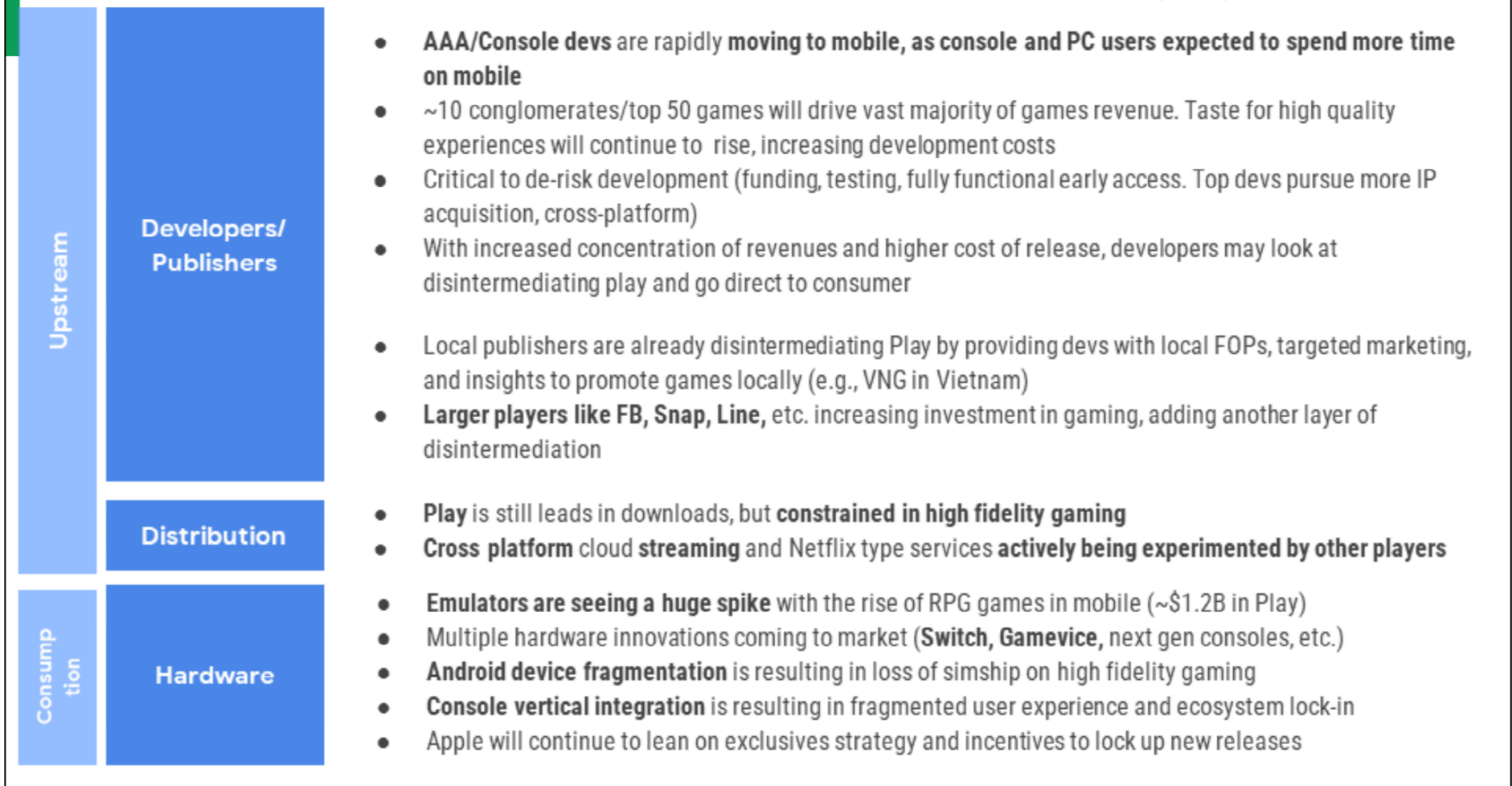
Will be helpful to see split by business model (F2P vs. Ads vs. Upfront Payment vs. Gaming subscriptions etc.) and CAGR for each.

Arvind Sharma, 7/11/2018

## This accelerated growth of games has led to a complex gaming ecosystem...



## ... with multiple trends happening in parallel across the ecosystem (1/2)



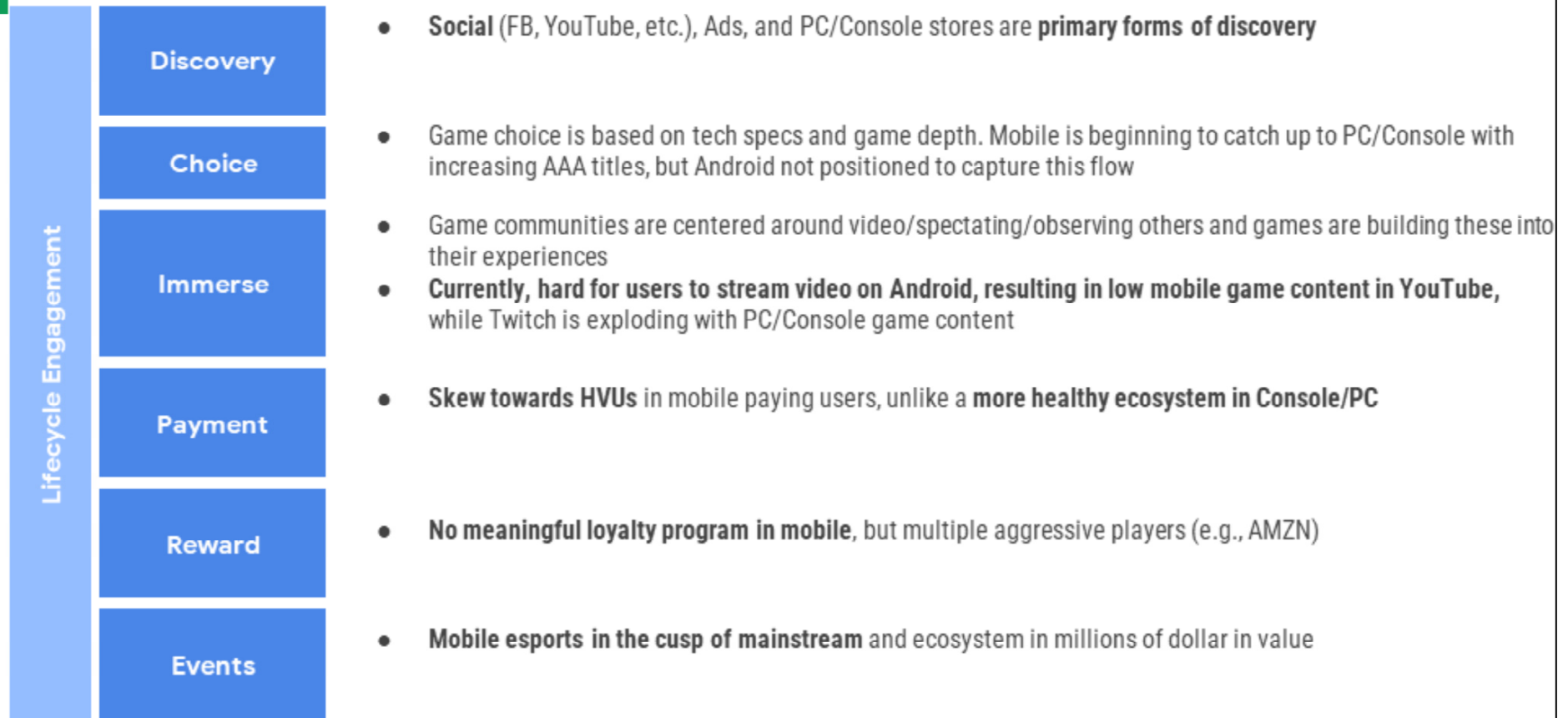
- Games evermore important IP for other forms of entertainment (e.g., movies, books, etc..)?

**Slide 5**

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- 3** Most dangerous trends...  
Ka Kui Cheng Ye, 7/10/2018

## ... with multiple trends happening in parallel across the ecosystem (2/2)

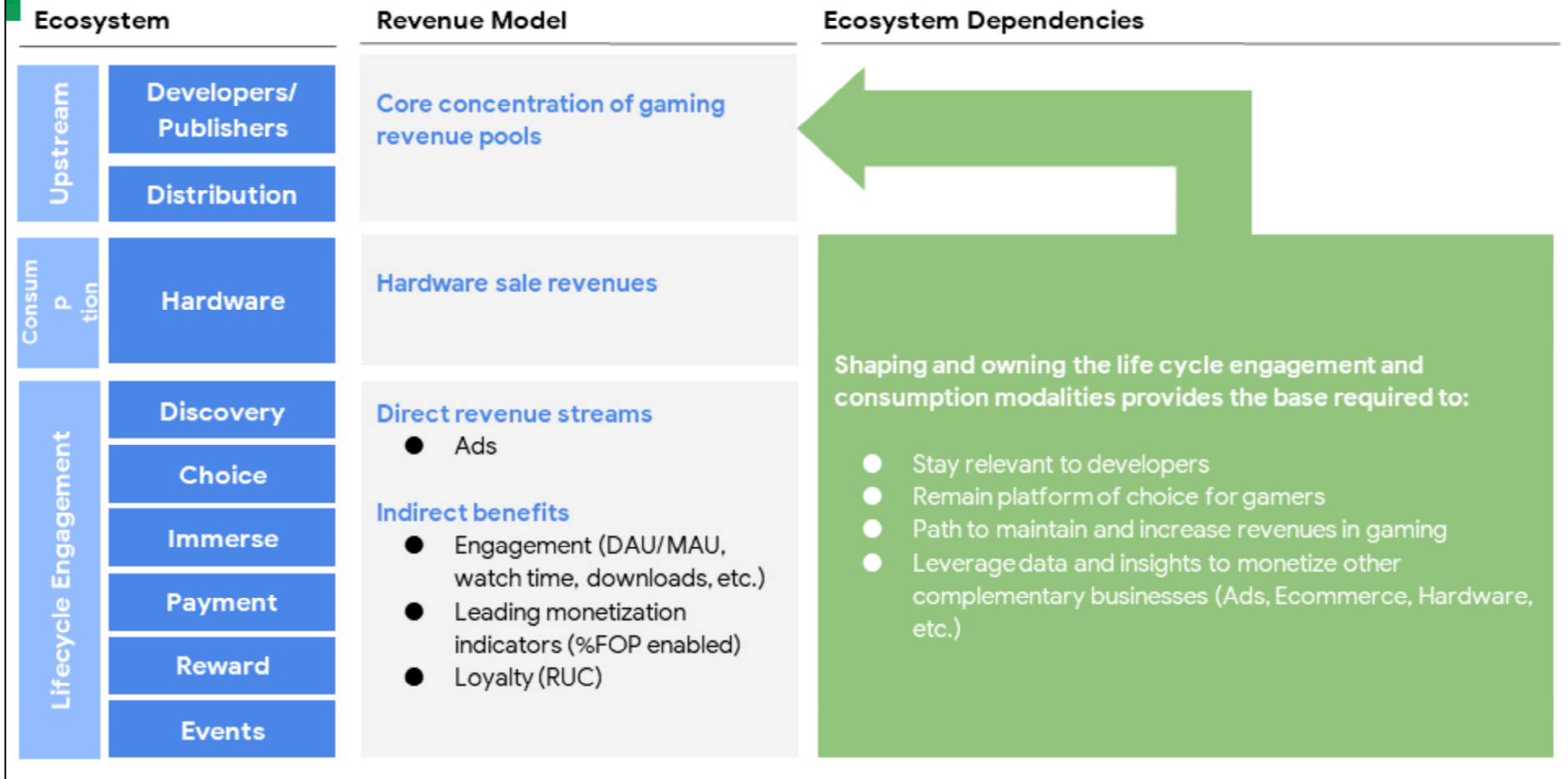


Slide 6

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- 1 can we see if we get more data on how each of these is popular in gaming..e.g., twitch # of video and watctime etc  
Ka Kui Cheng Ye google.com  
Karthik Moorthy, 7/5/2018

## In a nutshell, gamer lifecycle engagement is key to future growth



**Slide 7**

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**4**

Potentially revisit

Ka Kui Cheng Ye, 7/9/2018

## Contents :

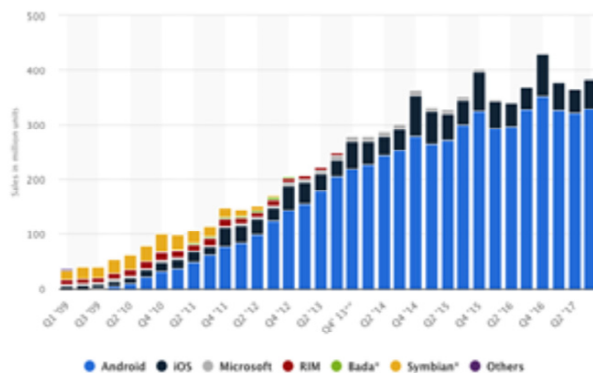


- 1. What's happening in gaming?**
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## Android is by far the most popular mobile gaming platform by users, while Play accounts for an overwhelmingly majority of downloads

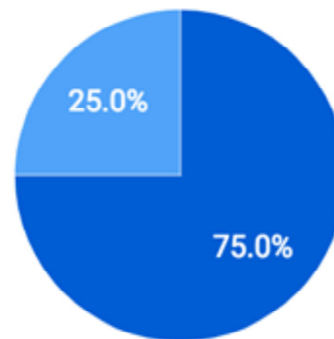
With over 300M units sold in Q1'18, Android has ~84% market share in smartphones

Global smartphone sales by OS (in million units)



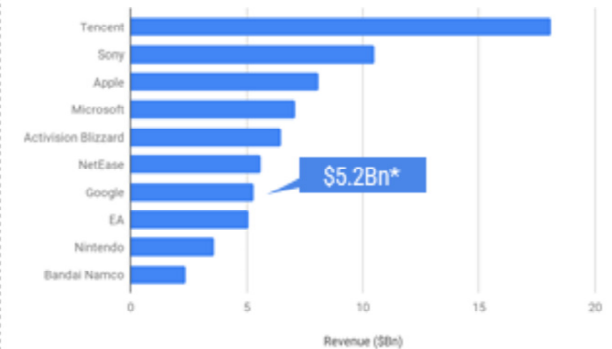
Accordingly, Play accounts for ~75% of all app and games downloads

2017 Apps & Games downloads by platform



Play is larger by revenue than some of the top gaming companies, including EA, Nintendo, and Bandai Namco

2017 revenue by gaming company



\*Play rev is from gaming only and exclude apps

Sources: Newzoo 2018 Global Games Report, [Statista Smartphone Sales](#), [Newzoo 2017 Revenue by Company](#)

**Slide 9**

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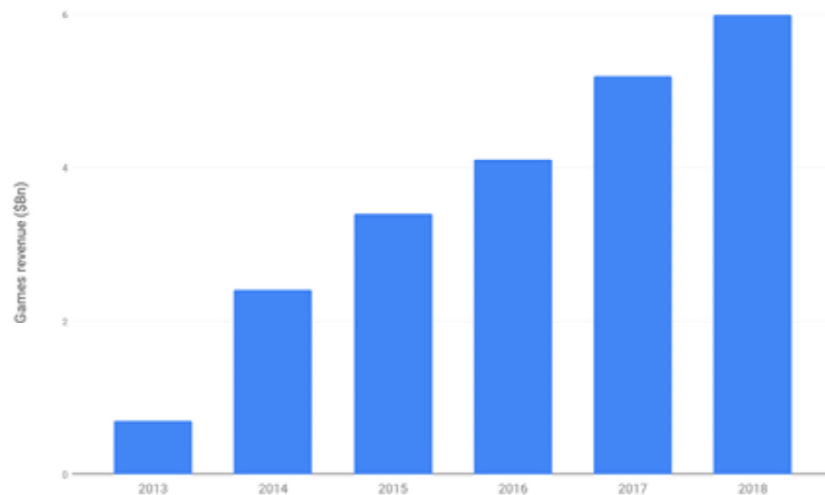
**5** Look into Amazon  
Ka Kui Cheng Ye, 7/9/2018

**2** Can we get revenue and user numbers by platform for top 50-100 gaming companies?  
It will be helpful to know which titles and developers make the most money today.  
Arvind Sharma, 7/11/2018

## While Play has grown to ~\$6Bn gaming business in 2018 (forecasted), the revenue is coming from a tiny fraction of users, ~1.2% of Play active installs

Play has grown from a \$0.7Bn business in 2013 to \$6Bn in 2018 (~53.7% CAGR)

Play revenue over the last 5 years



However, our user install base has remained steadily at 1.2%, presenting a concentration issue

% Buyers (of Play active installs)



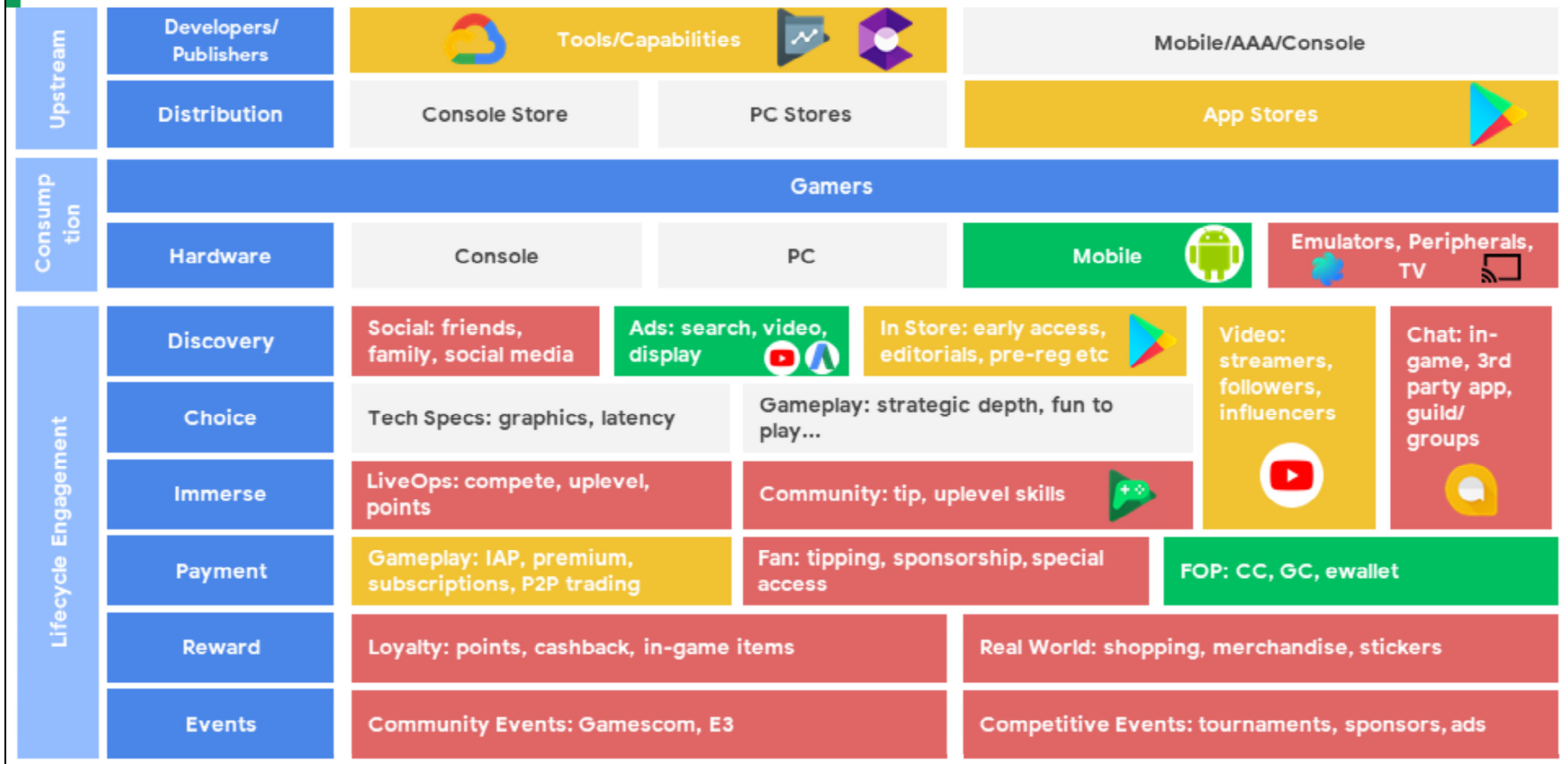
Sources: [Play Dasnav Revenue](#), [Play Dasnav % Buyers](#)

**Slide 10**

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- 8** Apple vs. Google... HFG lower on Android vs. Apple (130M vs. 400M)  
Ka Kui Cheng Ye, 7/9/2018
- 6** Opportunity of gamers vs. buyers... 70% of buyers are gamers  
Ka Kui Cheng Ye, 7/10/2018
- 7** Warning signs and their numbers  
Ka Kui Cheng Ye, 7/11/2018
- 3** buyer?  
Arvind Sharma, 7/11/2018

## To make matters worse, Google has multiple assets across the value chain, but no cohesive gaming strategy to engage the gamer lifecycle



**Slide 11**

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- 1** ads are a form of payment as well  
Tian Lim, 7/16/2018
- 2** only deliver rewarded ads to non paying segments. like me.  
Tian Lim, 7/16/2018

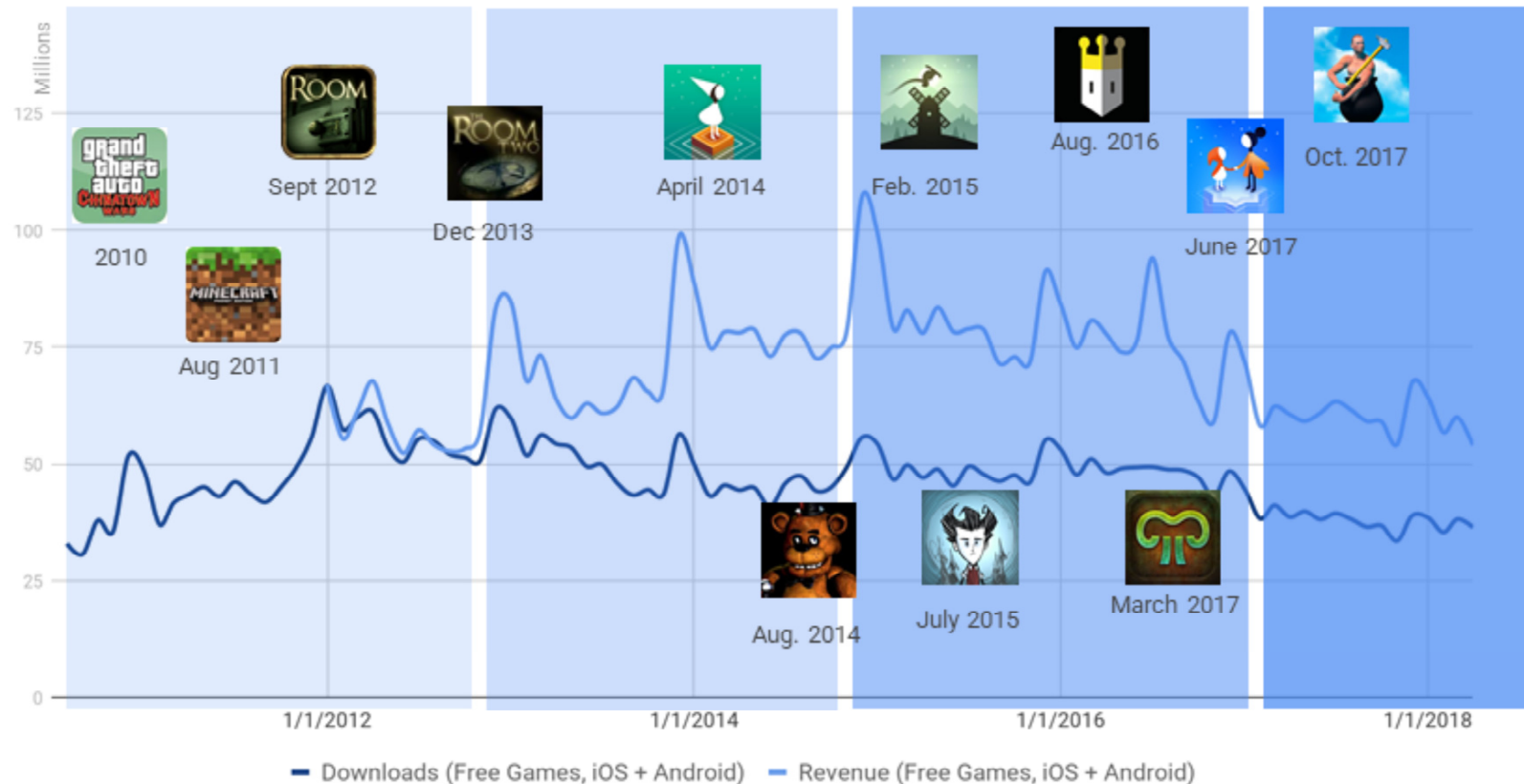
## For developers, rising development and marketing costs, as well as increased competition, have made the F2P market riskier



Sources: App Annie

## Hit-driven success, piracy, and discoverability issues have made it hard to make a business in premium

By contrast, revenue generated by game sales on Steam grew from 1.5B to 4.3B USD from 2014 to 2017\*



Sources: Statista.com, Appanie

**Slide 13**

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- 4 Legend is the same as previous slide - maybe you meant Paid Games?  
Arvind Sharma, 7/11/2018

## Consequently, developers expect more from us to justify our 30% fee

### Top Developer Concerns

**Open beta + Early Access:** Developers confused between Open Beta and Early Access, contributing to confusing UX

**Pre-registration:** Works best for big IP titles or indies with existing communities, or for devs with \$\$\$\$ marketing budgets

**Strategic Merchandising / Editorial:** Support largely limited to big-name developers and/or IP

**LiveOps Cards:** Limited release and No data / ROI tracking

**Commerce Solutions:** Unseen hero for developers (DCB, security, anti-fraud, etc.)

**PREX:** Store algorithms seen as a black box. Store is spammy, promotes clones and fast-follow ons

**Editorial Sales:** In order to participate in store sales, developers are required to discount at high (sometimes dangerous) levels & change their app icon

**Device Fragmentation:** Costly to test and manage with little/insufficient tools from Android. Emulators now popular across TW, CN, and KR. Game revenue growth in China

**Vulkan / GLES:** Only big-name developers get bespoke engineering help. High cost of maintaining graphics stacks

### Top Product Asks

- **Store Asks:**

- Remove fake reviews
- More granular insights on Store traffic (e.g., source, return users, etc..)
- Dynamic store listing page - show a different app landing page on Play depending on user segment or traffic source
- Predictive analytics capabilities to avoid "cold start"

- **Play Console asks:**

- Improve device targeting on Play Console
- App distribution management tools, similar to Hockeyapp
- Ability to set up and run content/LiveOps specific to each user country/region without different APKs or servers
- More flexible IAP prices for Emerging Markets

- **Better YouTube and Play integration (e.g., "Install Now")**

- Copy: [https://docs.google.com/spreadsheets/d/1M5ZKEg4V8qxejuEaSblkg5KmUOgAjU\\_KYaLU13Tv7\\_k/edit#gid=1578320996](https://docs.google.com/spreadsheets/d/1M5ZKEg4V8qxejuEaSblkg5KmUOgAjU_KYaLU13Tv7_k/edit#gid=1578320996)
- Original: <https://docs.google.com/spreadsheets/d/1-QeT7iX1-boGVPJCz2Wf5zHnYm4ptm1aw5p4HZbEDPk/edit#gid=1578320996>

## Slide 14

- 9 which developer framework from greg/arvind? games of tomorrow deck or growth consulting deck? I don't see a dev framework on either. can you copy/paste the slides you meant?  
Ka Kui Cheng Ye, 7/7/2018
- 10 check out slide 11 and slide 12, which graphically present the pressure devs face. I also create this slide with concerns and asks, but I'm thinking slide 11 and 12 tell the story we need for now and we can move this one down.  
Ka Kui Cheng Ye, 7/7/2018
- 2 Ka Kui Cheng Ye@google.com i would like to another dimension of insights from dev consulting deck on what aspects are important to developers (insights, derisking, cloud , experimentation etc)... in addition to the frustration points.. maybe total 2 slides.. take points from the developer framework greg/ arvind had  
\_Reassigned to Ka Kui Cheng Ye\_  
Karthik Moorthy, 7/8/2018
- 3 [https://docs.google.com/presentation/d/1aNLWQlyVzF2et9w8S8MK9bGL6LAKbMCYsAbYee71Y8o/edit#slide=id.g3bf675295e\\_30\\_22](https://docs.google.com/presentation/d/1aNLWQlyVzF2et9w8S8MK9bGL6LAKbMCYsAbYee71Y8o/edit#slide=id.g3bf675295e_30_22)  
Karthik Moorthy, 7/8/2018
- 1 Ka Kui Cheng Ye@google.com Karthik Moorthy@google.com  
  
One of the things I heard when doing the dev / pub interviews for value chain was that the little guys need more help with analytics / data science. They simply can't match the big guys here anymore and its impacting their ability to drive monetization  
\_Assigned to Ka Kui Cheng Ye\_  
Ashnil Dixit, 7/9/2018

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# Why is everyone trying to win in gaming? Because gamers represent a core valuable demographic of young and engaged users

## Core Millennials



Average gamers are millennials with an age of 31

Gamers by age



57% Millennials and Gen Z

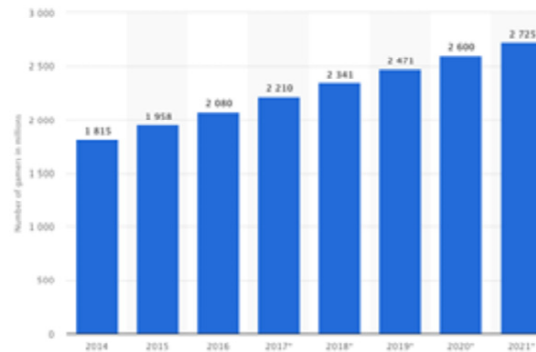
Sources: [Statista Gamer Age Distribution](#), [Statista Gamer Growth](#)

## Growth



Worldwide number of gamers is expected to grow at 5.14% CAGR in the next 3 years

Active video gamers 2014-2017 (in millions)



## Hard to Reach



Fragmented across many different sites, apps, titles

TV not magic bullet

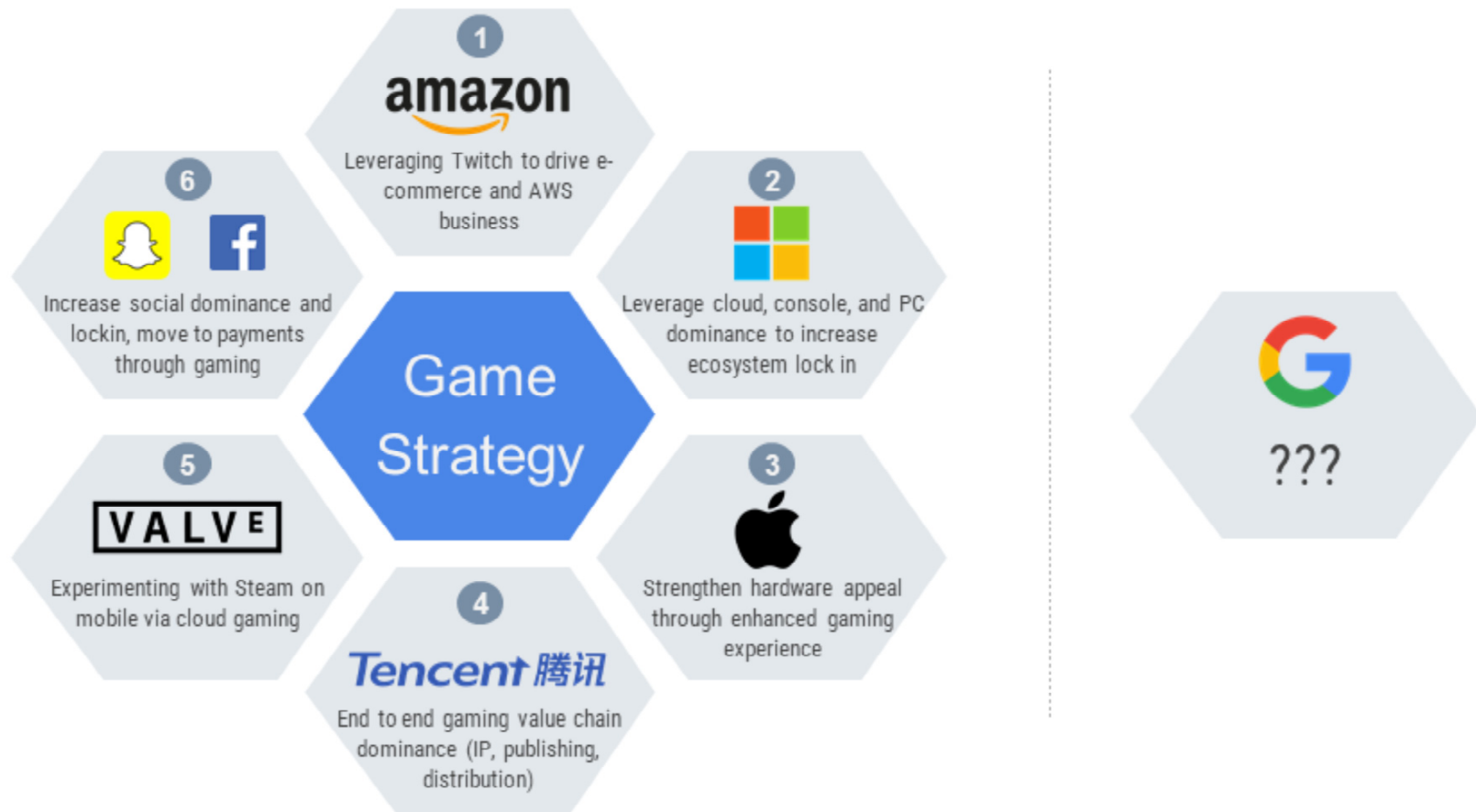
- 18-25 watch esports as much as hockey
- 190M watch esports regularly
- Only 4 hrs watching broadcast TV; 8 hrs gaming

Skeptical of advertising

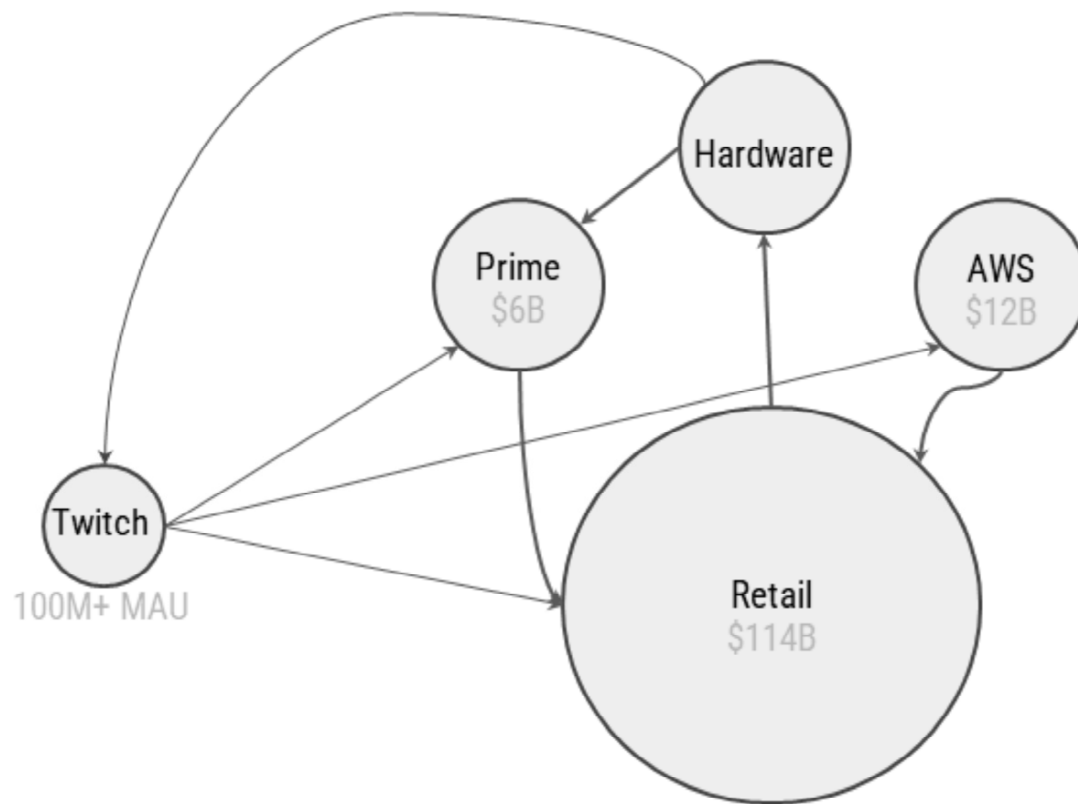
- 78% of fans would pay to skip ads
- Avid ad-blockers

- Credit goes to Dan Song's eSports slides

Many tech companies have a cohesive gaming strategy to reach the target demographic and grow their core business... but what is ours?



## Amazon is investing in a full suite of products for developers and users across the entire stack that collectively reinforce their ecosystem value and retail business



### Amazon key gaming assets & strategy

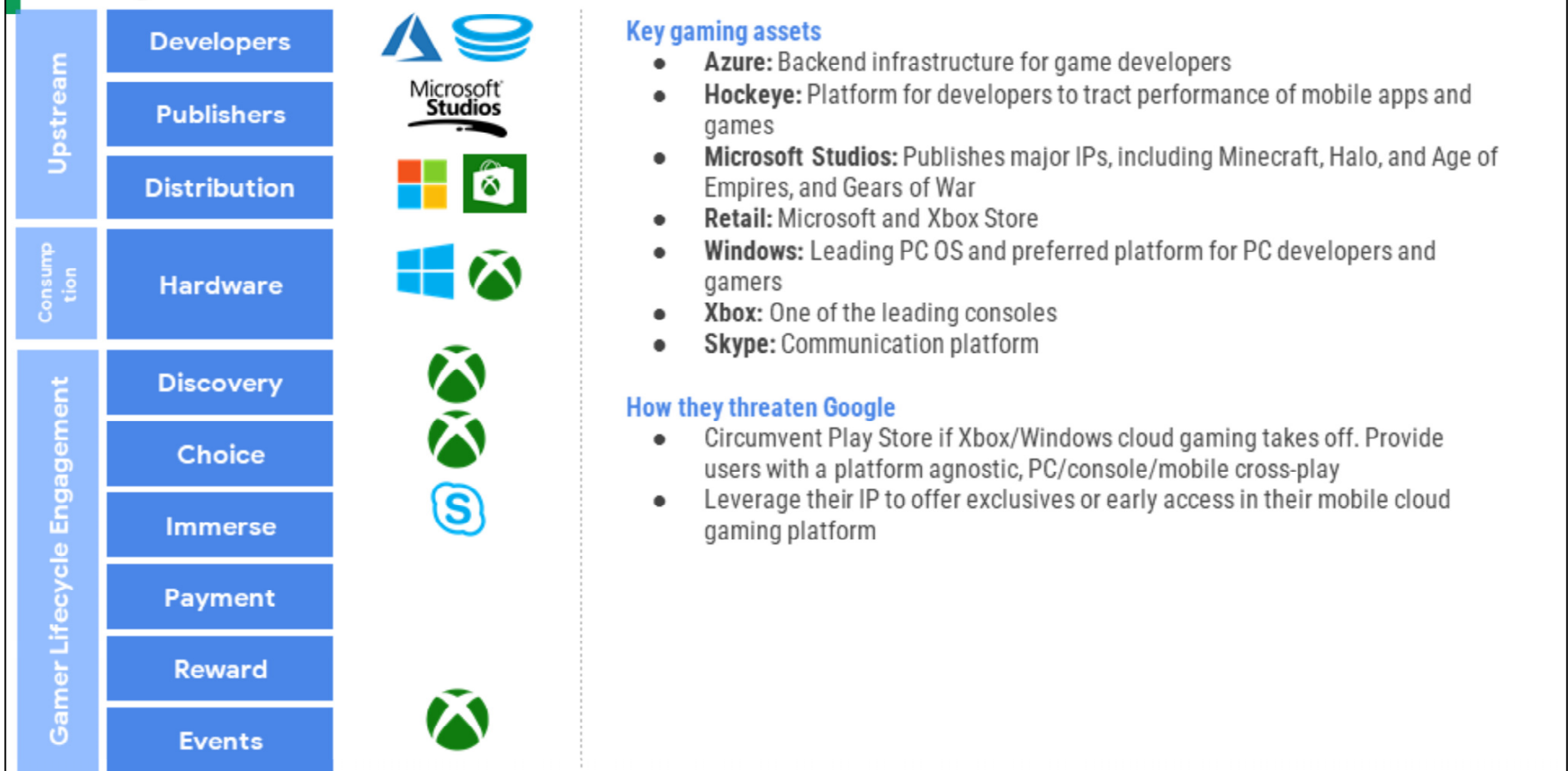
1. **AWS/Lumberyard/Gamesparks:** Backend infrastructure and tools for game development
2. **Twitch/Curse:** Central gaming platform for users and source for new Prime subscriptions
3. **Hardware:** Fire Tablet and Fire TV as distribution points for the Amazon Appstore, an alternative to Play with Amazon Coins for loyalty and discounts
4. **Retail:** Cross-section between developers and gamers, uniquely positioned to blend physical retail with digital offers to gamers (e.g. toys that unlock game content)

### How they threaten Google

- Become the preferred platform for developers as they can build (AWS and Lumberyard), reach and engage users (Twitch), and sell through Amazon
- Continue to shift eyeballs from YouTube to Twitch
- Disintermediate Play by continuing to provide discounts to HVUs via the Amazon Appstore and doubling down on their Fire devices to provide more surfaces on which to sell mobile games

- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)

## Capitalizing on their PC & console assets, Microsoft can shift into mobile gaming through their cloud-based business



- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)

**Slide 19**

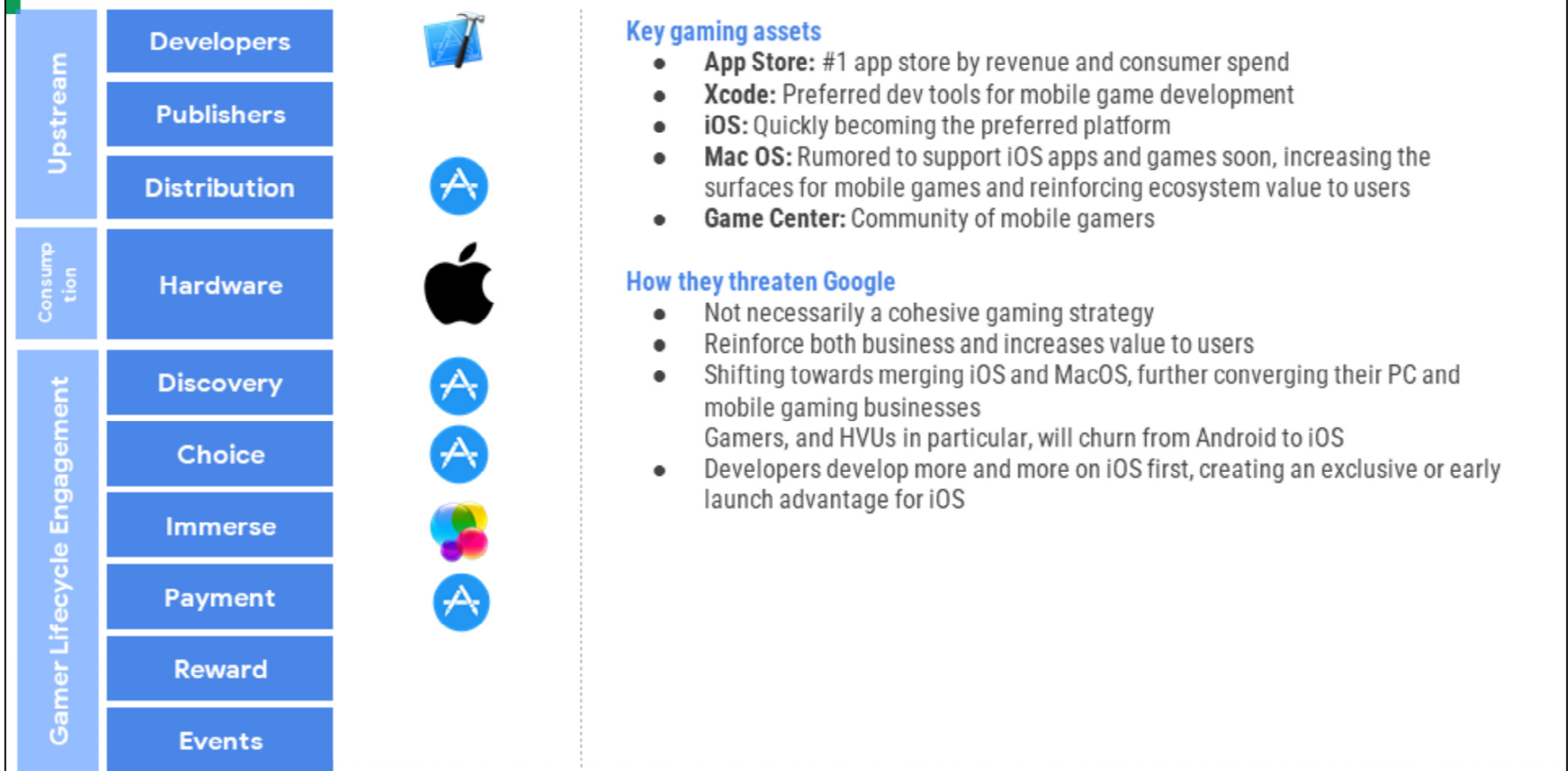
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**11**

**MSFT next-gen consoles**

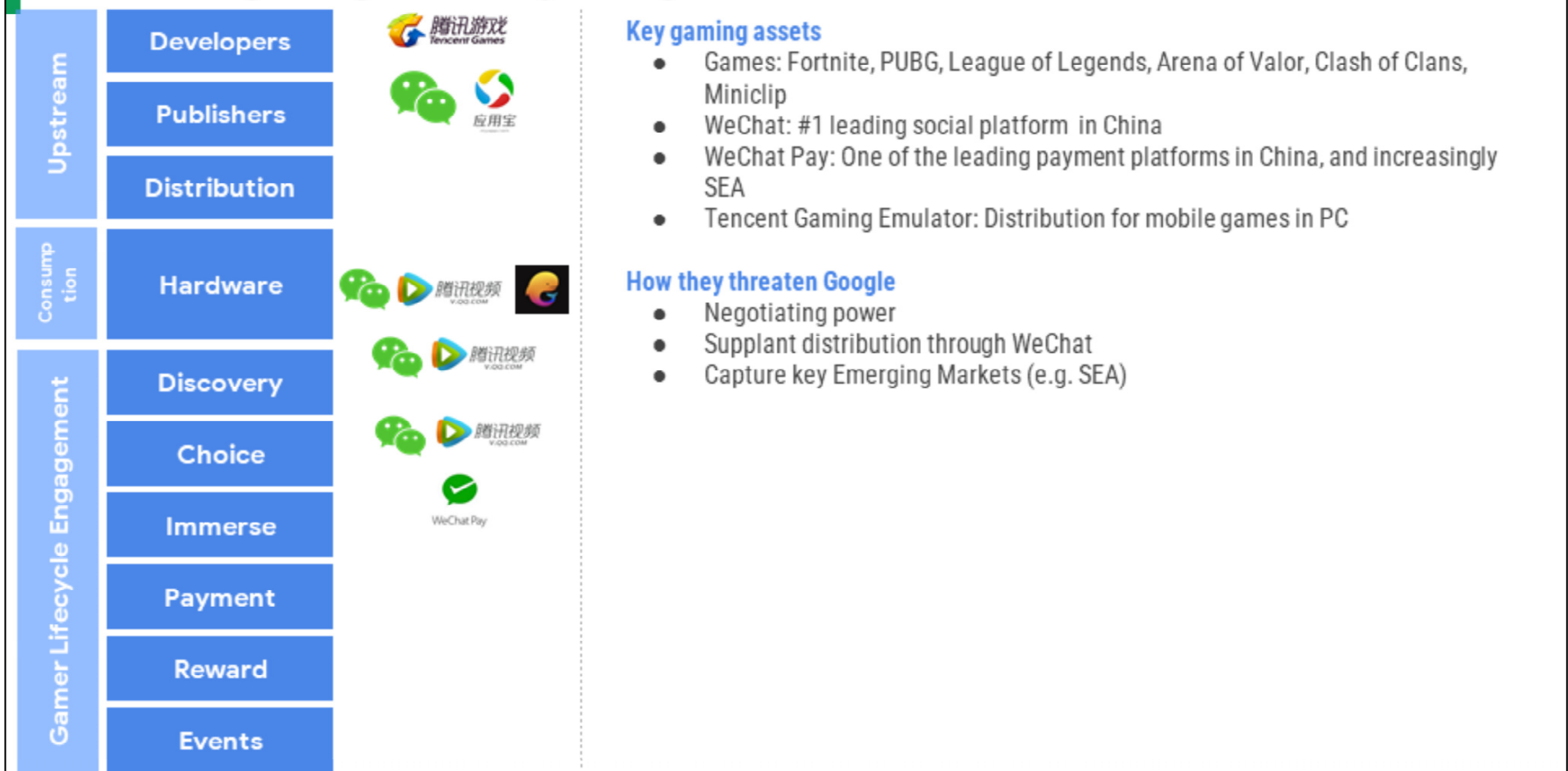
Ka Kui Cheng Ye, 7/11/2018

## Apple could become the default preferred mobile gaming with continued investments in HFG and their operations in China



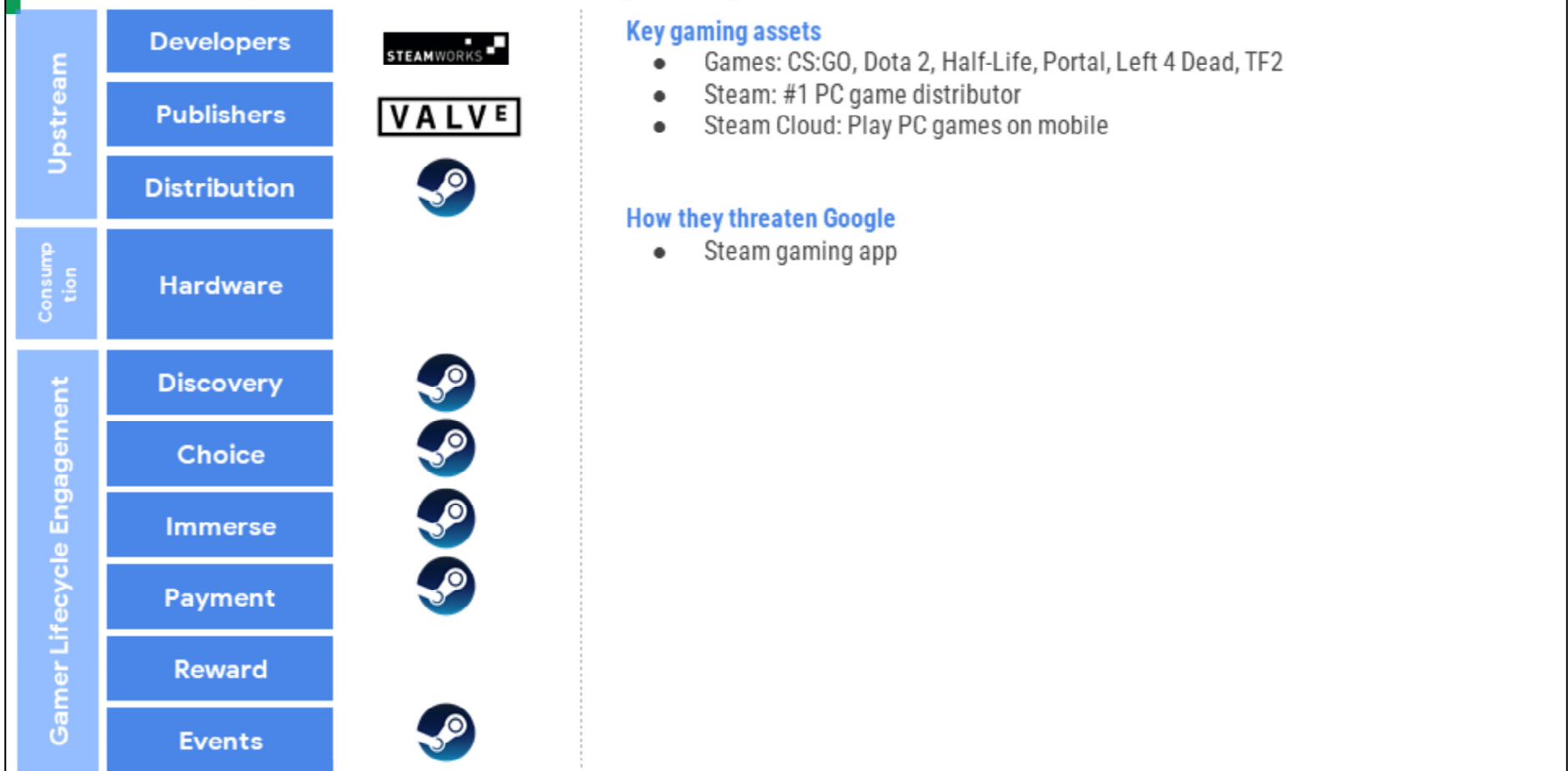
- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)

## Tencent is consolidating the industry by aggressively investing in popular PC, console, and mobile gaming IP and expanding across the value chain



- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)

## Coming from their strength on PC distribution, Valve can leverage its IP and brand to start making inroads into mobile gaming



- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)

**Slide 22**

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**12**

300 people... no strategy

Ka Kui Cheng Ye, 7/11/2018

## There are multiple potential players also investing in the mobile gaming space



- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqr4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)


The good news is that we have multiple desirable assets within the gaming ecosystem			Google	Amazon	Microsoft	Apple	Tencent	Valve	Others
Upstream	Dev Tools								
	Publishers								
	Distribution								
Consumption	Hardware								
Gamer Lifecycle Engagement	Discovery								
	Choice								
	Immerse								
	Payment								
	Reward								
	Events								

**Slide 24**

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- 13**      Insert Nvidia GeForce Now, FB Gameroom  
Ka Kui Cheng Ye, 7/9/2018
- 14**      Skip for now: move to different section  
Ka Kui Cheng Ye, 7/10/2018

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## Key principles we will follow for Google to win in Gaming (WIP)

### USER

- Make **gaming for everyone** – not just gamers, but also **viewers** and **fans**
- **Breakdown the silos** – enable users to play anytime, anywhere, and on any device
- **Establish Google** as the **destination** for **end to end gaming**
- Drive **responsible gaming**, not addictive behavior

### DEVELOPERS

- **Make game development for everyone** – not just mobile majors / AAA
- Give **devs tools needed to own their destiny** and engage users across lifecycle
- **Make paying for gaming as common as Netflix**. Re-establish premium and introduce subscription pricing while keeping freemium

### PLATFORMS

- Android has best in class capabilities **designed and built** for superior gaming
- **Get Google 1P products to collaborate** rather than compete for gamer time
- Set up platform to **drive hardware innovation at scale for gaming**
- **Not focus on IP ownership, but focus on user journeys and engagement moments**

**We envision a future where Google delivers a compelling end to end experience for users**

Placeholder for end-to-end Google gaming strategy (users or dev)

**Slide 27**

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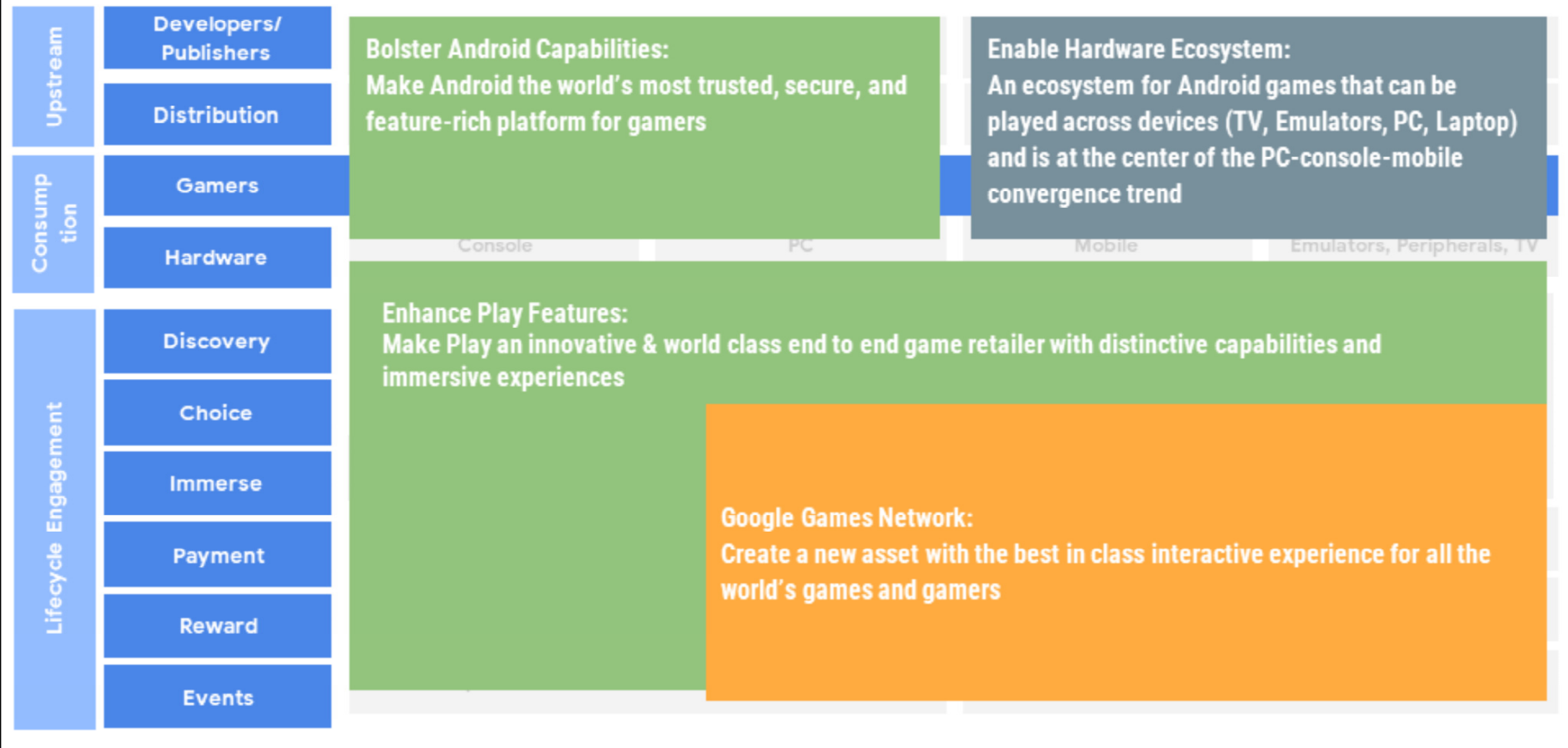
**15**

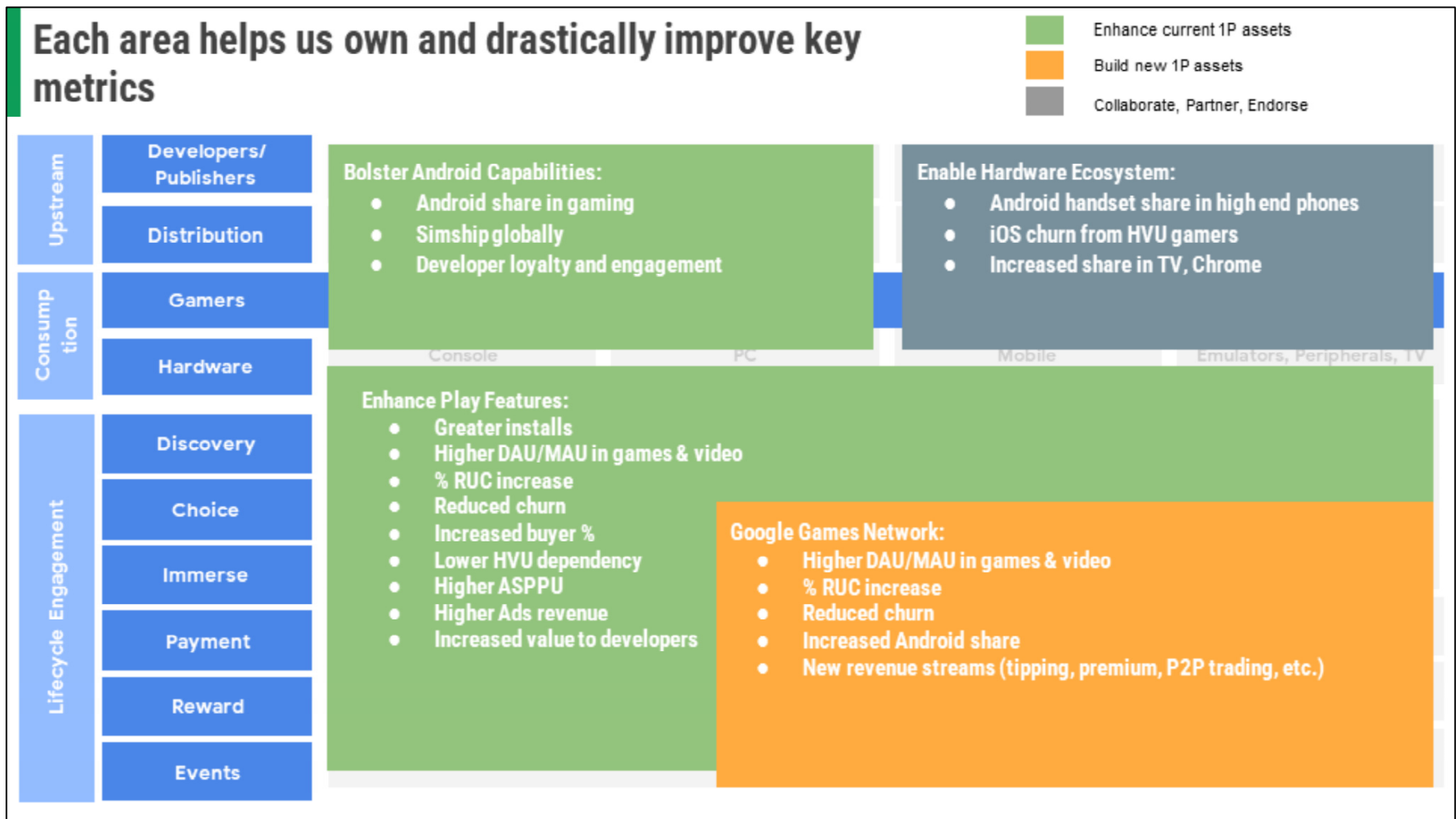
**Redesign**

Ka Kui Cheng Ye, 7/9/2018

## Four strategic moves for Google to embed itself in the gaming value chain

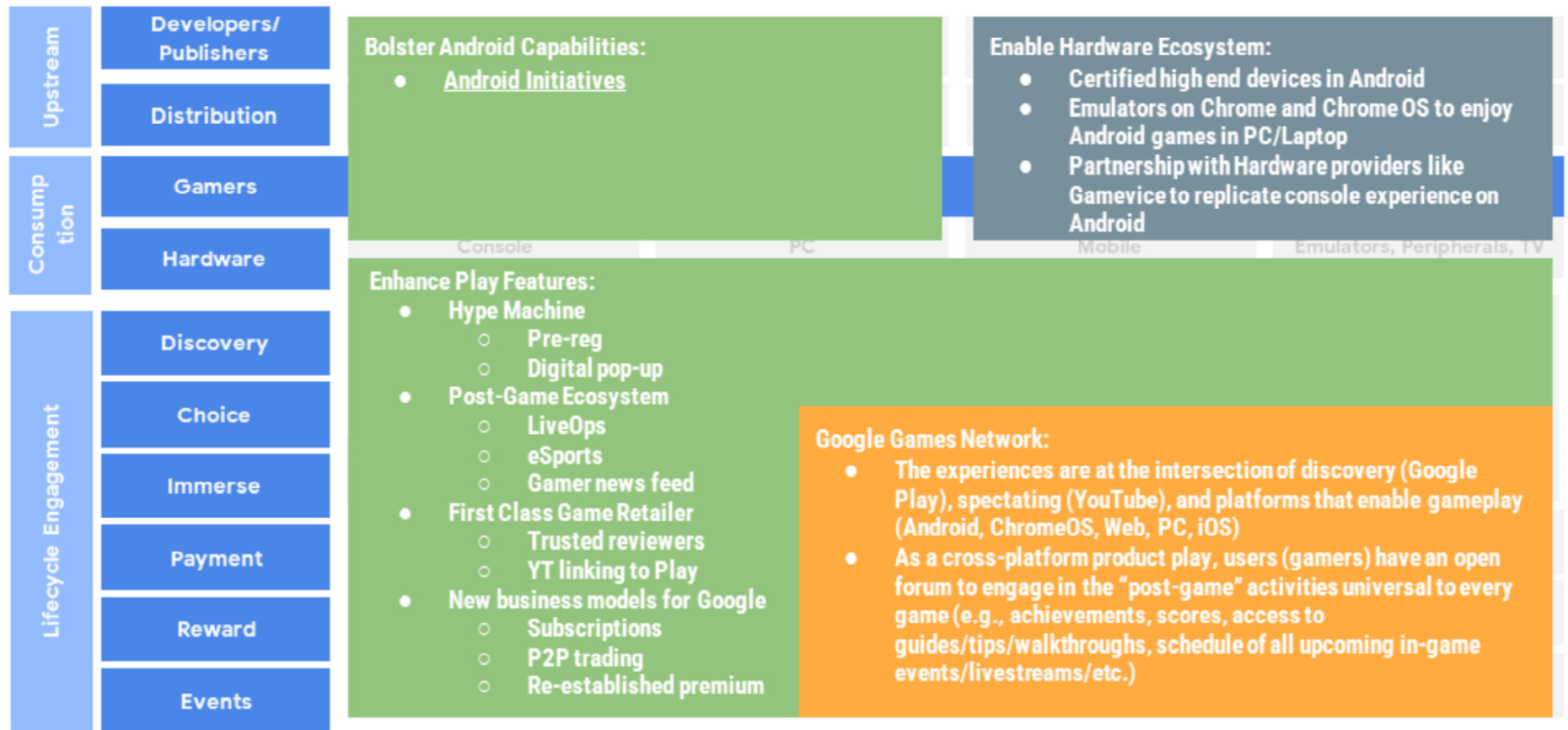
- Enhance current 1P assets
- Build new 1P assets
- Collaborate, Partner, Endorse





## We already have a long list of ideas across each section

- Enhance current 1P assets
- Build new 1P assets
- Collaborate, Partner, Endorse

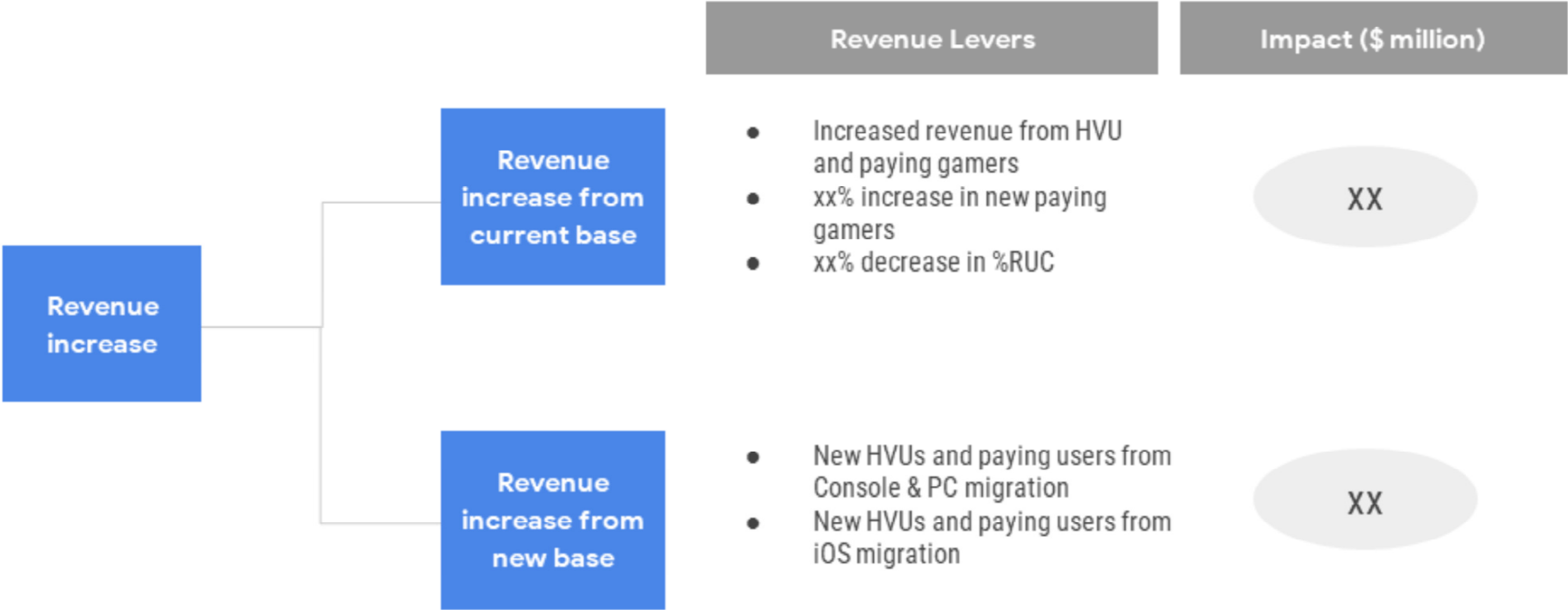


Slide 30

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- 16 **Karthik Moorthy** @google.com FYI latest format for the list of initiatives  
Ka Kui Cheng Ye, 7/9/2018
- 3 meta currency? to enable movement of sunk money between games/apps  
Tian Lim, 7/16/2018

# Enhancing our capabilities in gaming presents a direct \$XX billion opportunity for Play and Android



- Existing user marginal revenue vs. new user revenue vs. iOS churn user revenue

## Other Google assets also gain significantly in this process \$XX and XX user gain


	Key Metric	Methodology	Impact
YouTube	Watch Time , DAU, MAU	<ul style="list-style-type: none"> <li>Estimate # of videos (supply) with easier streaming/HFG games/etc.</li> <li>Estimate demand (DAU, MAU) and impact (rev in Ads as a result)</li> </ul>	XX
Payments	FOP Enabled/ NPU	<ul style="list-style-type: none"> <li>Estimate increase in FOP enabled % in Android base with the introduction of a unified game experience, new business models (subscription, etc.)</li> <li>Calculate % increase in payment because of gaming</li> </ul>	XX
Cloud	Revenue	<ul style="list-style-type: none"> <li>Estimate total infrastructure spend in gaming (from AAA, Console, Mob devs and pubs)</li> <li>Estimate % market share for Google based on bundled offer to devs (use Cloud pilot from Atul as base product offering and benefit)</li> </ul>	XX
Ads	Revenue	<ul style="list-style-type: none"> <li>Estimate increased usage (time spent and download) by gamers in Play Store and new games network surface</li> <li>Estimate % increase in Ad revenue</li> </ul>	XX
Shopping	Revenue	<ul style="list-style-type: none"> <li>Estimate % users who would use Google Shopping based on tight-knit loyalty program and hard bundles in key moments</li> <li>Estimate traffic to shopping that will be sent and impact to shopping revenue</li> </ul>	XX
Comms	MAU	<ul style="list-style-type: none"> <li>Estimate PC/Console chat MAU size</li> <li>Estimate Projected mobile MAU size</li> </ul>	XX
Chrome + CrOS	MAU	<ul style="list-style-type: none"> <li>Estimate increase in Chrome and Chrome OS usage based on emulator bundles on Android games</li> </ul>	XX
Assistant	DAU, MAU	<ul style="list-style-type: none"> <li>Estimate increase in Assistant traffic, if we link Assistant to discovery in user journey design</li> </ul>	XX
Others (Hardware, VR/AR, Geo)	Varies	.....	XX

**Slide 32**

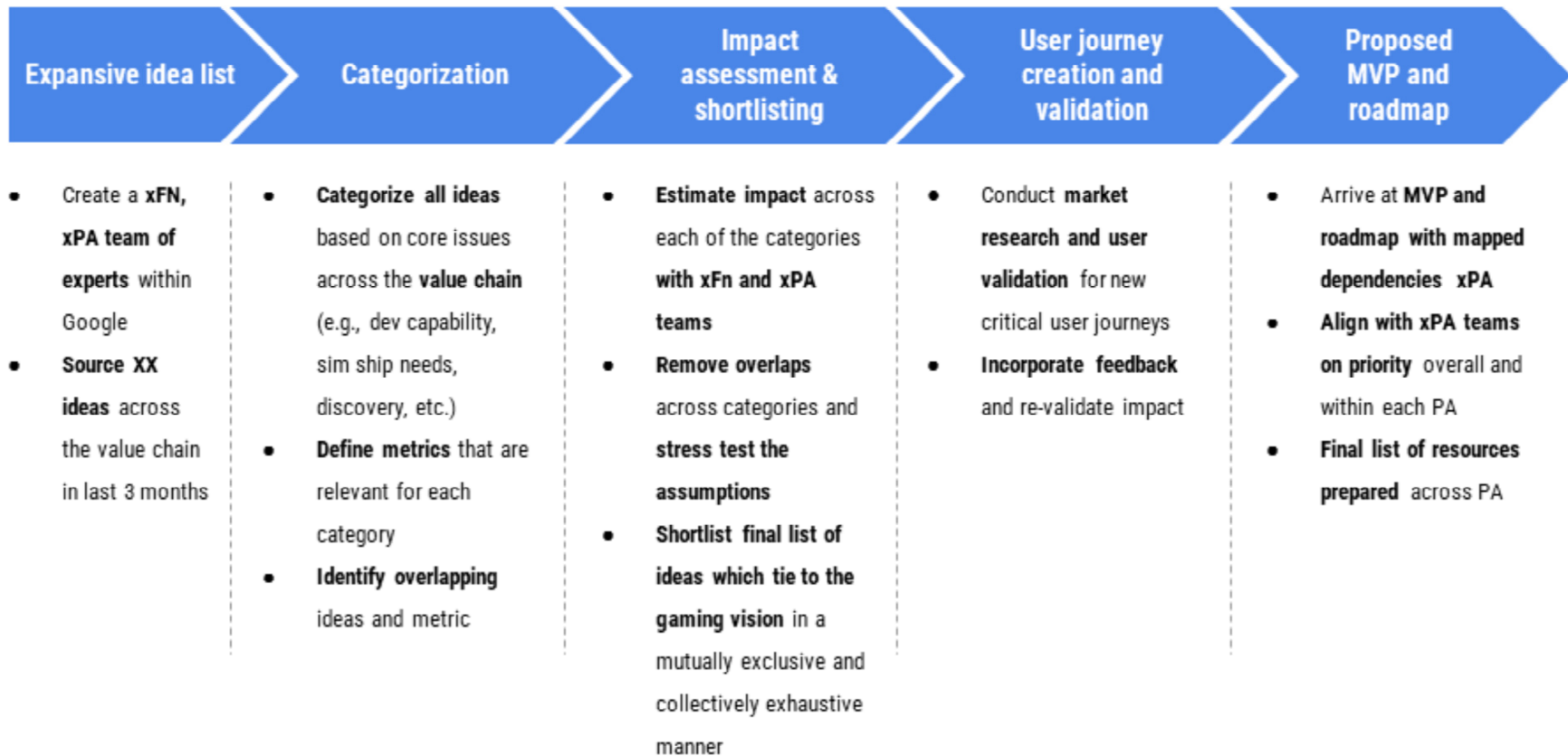
---

- 17** Focus just on YT, Chrome, and Cloud is impactful enough.  
Ka Kui Cheng Ye, 7/9/2018

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## We're following systematic approach to users and impact to arrive at the final product offering



## Project Lion Force Next Steps

### Structure & Flow

- Align on core framework we are using to make the TOP DOWN story in gaming
- Align on the flow leading up to 4 BHAGs

### Quant Streams

- Agree on the estimation methodology top down ([Slide 32](#))
- Finalize on estimation methodology bottom up at idea level ([Slide 31](#))
- Engage xFn and xPA teams to complete assessment

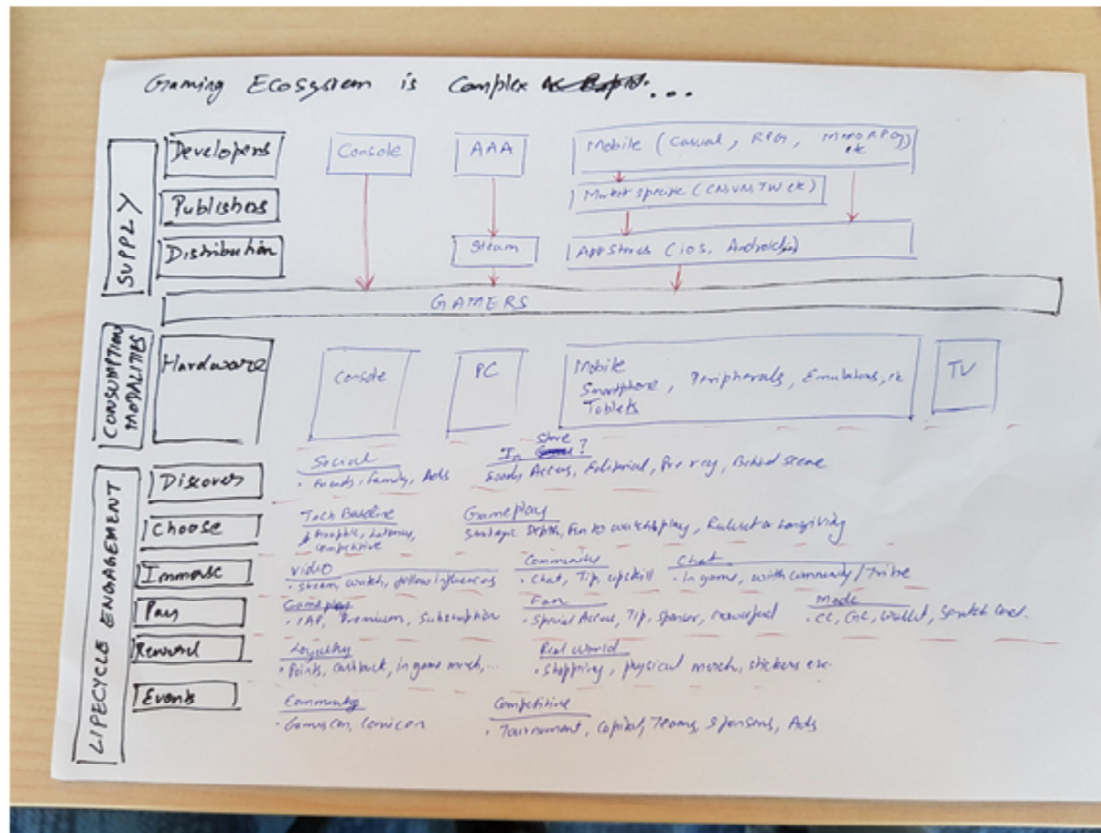
### Working Rhythm & Next Steps

- We would like the quant stream to go in parallel with the MVP/user journey stream
- Aditya, Shelby, and Ka Kui to run the quant steam
- Karthik and Ka Kui to work with relevant PM teams for the product answer and detailing

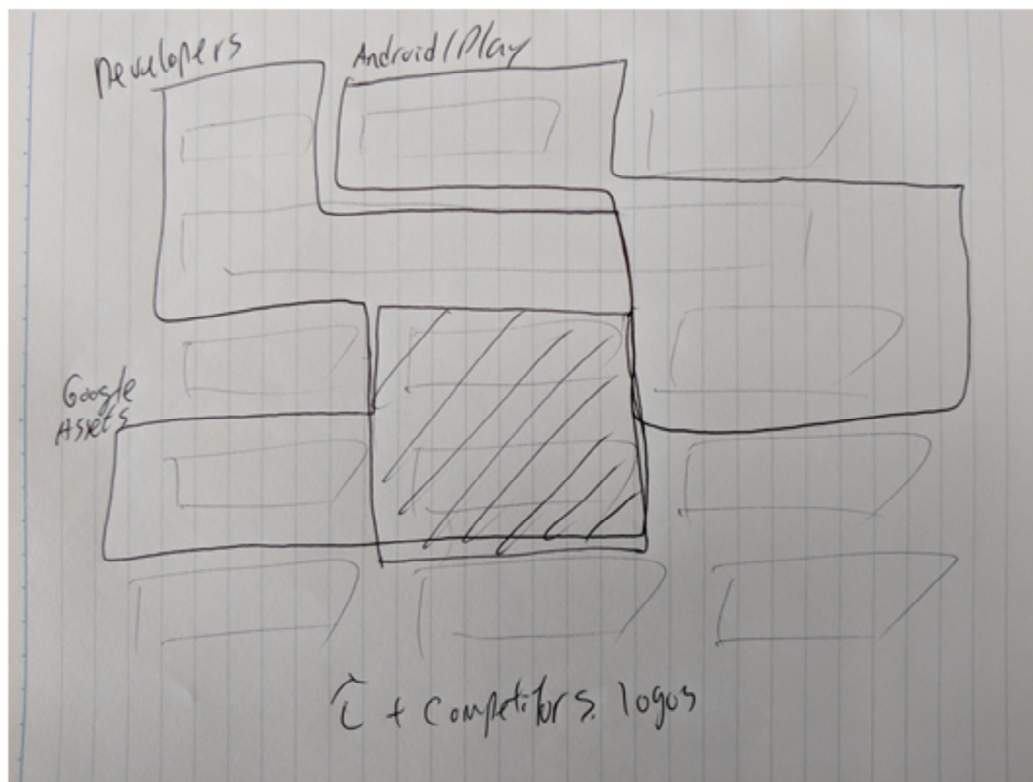


# GRAVEYARD

## Gaming ecosystem is complex



## Framework (Strategy) + Value to Google (\$/Users) + Principles (Vision) = Where We Focus

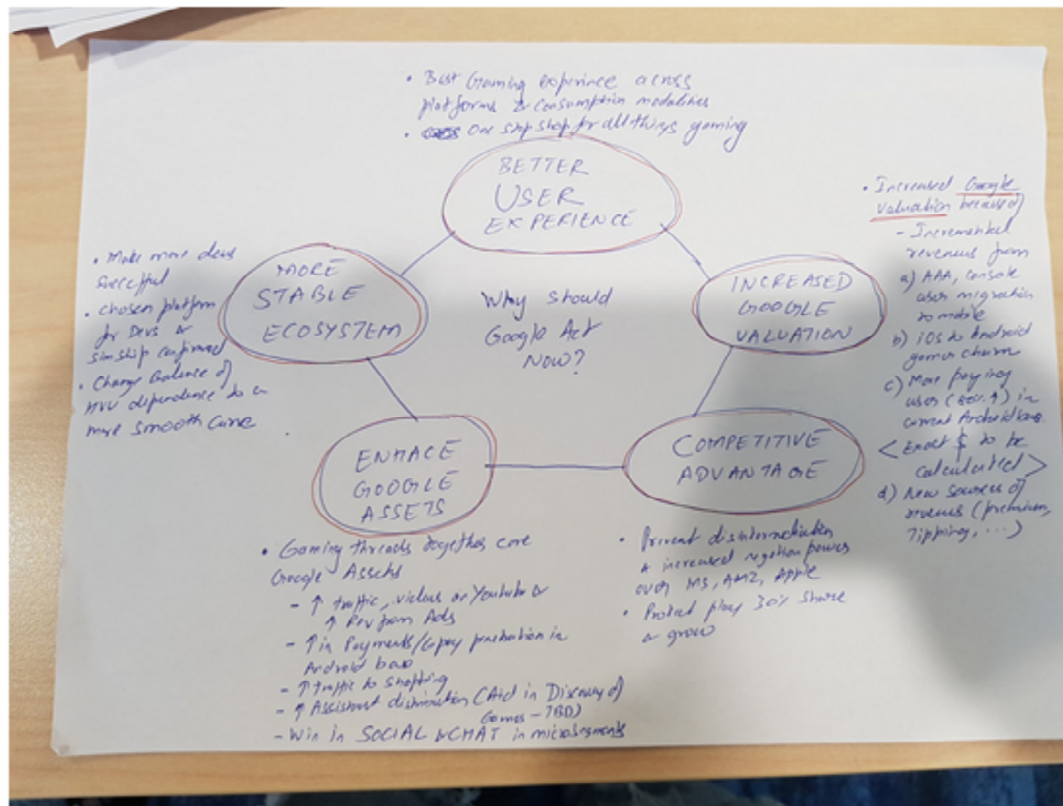


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- 4 framework + google assets + where to play  
Karthik Moorthy, 7/5/2018

## Winning in gaming has multiple benefits to Google overall

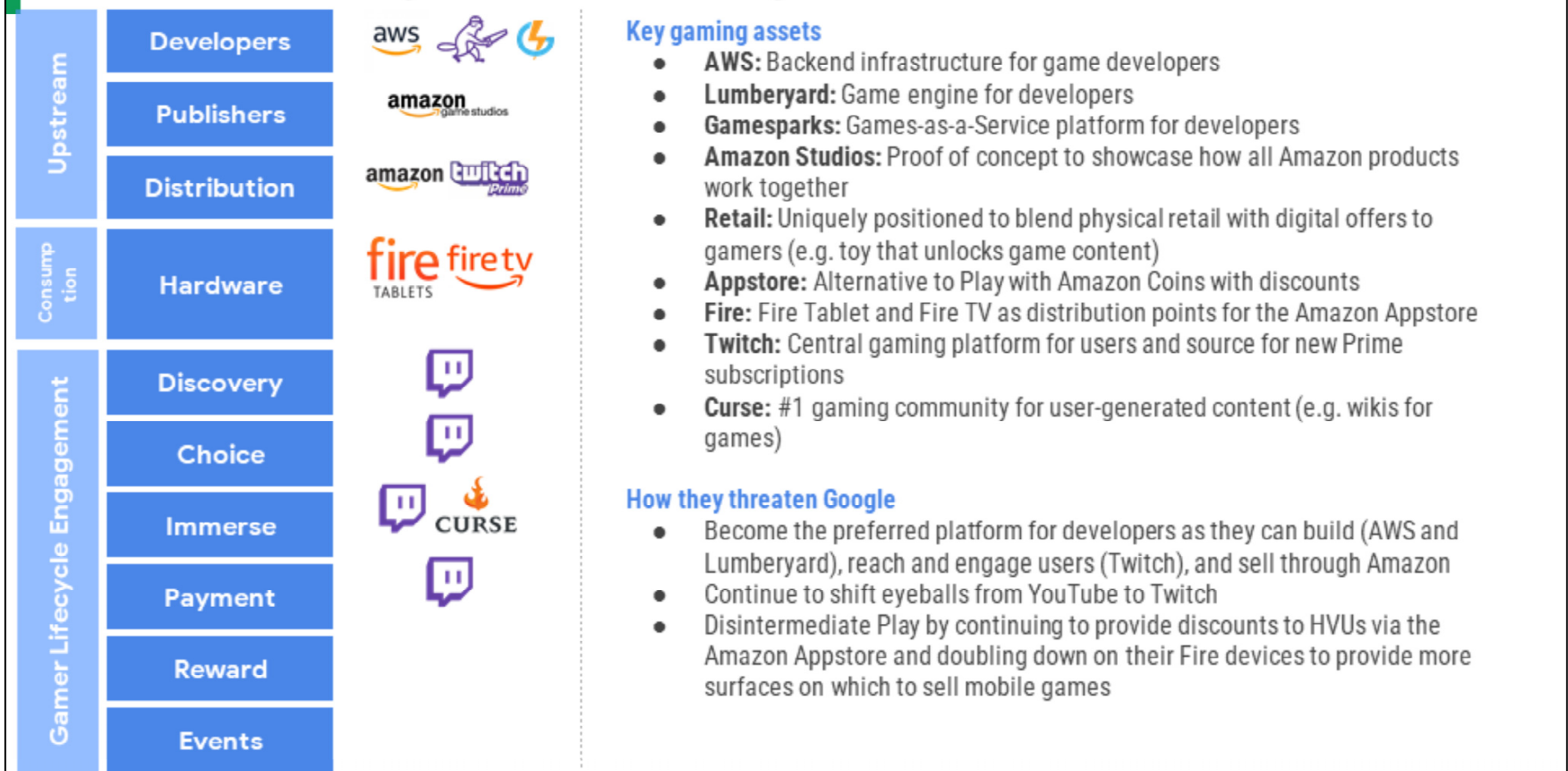


## Enhancing Android and Play capabilities presents a potential \$XX and XX users upside

<u>New business models</u> - Tipping - Fan subs - P2P	<u>Methodology</u> ① PC/Console Mkt size $\Rightarrow$ Predictive Mobile Mkt size $\Rightarrow$ % Capturable by Google	<u>Assumptions</u> - Mobile Mkt size should follow similar trend as general mobile vs. PC/console gaming in early days.	<u>Impact</u> \$XX
<u>Platform Convergence</u> - PC to Mobile - Console to Mobile - Emulators	<u>Methodology</u> ① Newzoo Forecast for PC vs Console vs Mobile $\Rightarrow$ ② shift % from PC/Console to Mobile w/ upper and lower bound ③ % of remaining into Android/Play	<u>Assumptions</u> - Newzoo is starting benchmark - Our initiatives will shift Newzoo forecast into mobile. <del>ARPPU shift</del>	XXX
<u>iOS Churn</u>  <u>esports?</u>	<u>Methodology</u> ① Canalys iOS/Android forecast ② internal ARPPU for Android ③ App Annie for iOS ARPPU	 <u>Assumptions</u> - Our initiatives shift Mkt share from iOS by X% - Churn rate difficult/inaccurate to calculate.	XXX

- Existing user marginal revenue vs. new user revenue vs. iOS churn user revenue

## Amazon is investing in a full suite of products for developers and users across the entire stack that collectively reinforce their ecosystem value



- [https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0\\_0\\_6](https://docs.google.com/presentation/d/1QGKh1Uw64RySwgulRoGiqrR4k947EKMuhfV4wSpINGI/edit#slide=id.g22d8a790a0_0_6)